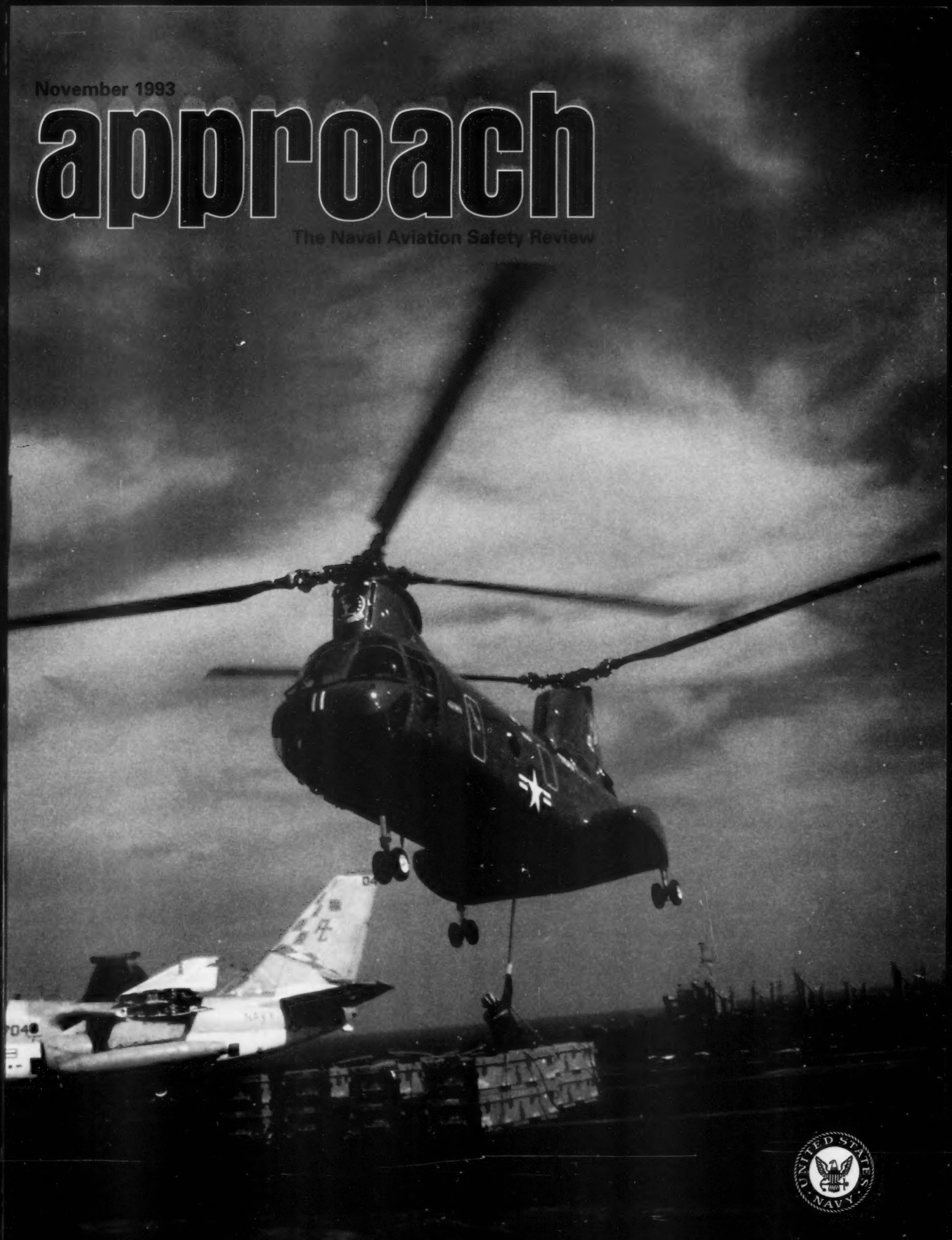
November 1993

approach

The Naval Aviation Safety Review



EDITORIAL

Zerø Tolerance

A pilot in the training command lands gear up. No other emergencies, he just didn't put the gear down. Another pilot puts his airplane into a spin during an ACM hop. He uses the wrong procedures and is unable to recover. He ejects. On a cross-country, a crew gets low on gas in bad weather without a useable divert. They eventually sneak in to their destination, just below minimums and land safely well below SOP on-deck fuel.

If you were in charge, would all of these aviators still have their wings? Would you be surprised to hear that all of them are still flying?

How many errors, lapses of judgment or violations of rules should an aviator be allowed? When is an error caused by lack of experience, and when is it caused by an inadequate aviator? The answers to those questions are not easy.

In the training command, students are graded after every flight for aviation skills, general knowledge and most importantly, headwork. That grading ceases once the student joins a fleet squadron. An occasional EP quiz and the annual NATOPS check (and the infamous greenie board) are the extent of the grading in most squadrons.

Aviators constantly make fun of our uptight blackshoe comrades. To us carefree aviators, they seem a tense and skittish group. But I suppose we'd be a little more nervous if we had the skipper in the cockpit every time we flew. On board a ship, the captain is usually only a few feet away sitting in his big chair when the OOD is driving the ship. At most, the captain is just down the passageway in his cabin.

Peter Mersky

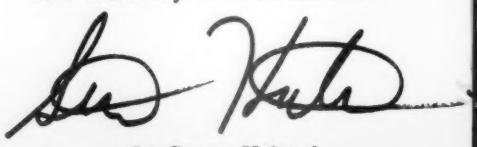
That watchfulness may take some of the fun out of driving ships, but it also makes for alert OODs. The CO notes the slightest error and more grievous errors (like ordering a turn to port and making the skipper order a starboard turn to avoid another ship) may result in loss of a qual or worse, a B in seamanship on a fitrep. Pretty much a career killer in today's Navy.

Take that same JO and put him in a $40-million airplane. He makes a small judgment error — like accidentally firing a Sidewinder — and after a rug dance (possibly a short grounding) and a new call sign, he's back yankin'-and-bankin'. Seems aviation is quite forgiving.

There have been times when the Navy has had to accept less than the best, but this isn't one of them. There are more people looking for seats than there are seats available. During a time of downsizing, the Navy can afford to be choosey.

A less tolerant policy toward errors would have several effects. It should reduce the mishap rate. Since more than 50 percent of the mishaps have aircrew error as causes, there is a lot of room for improvement.

Because of the operational requirements of naval aviation, our rulebooks (NATOPS and 3710.7P) cannot cover every contingency. We are expected to make the right decisions based on experience and the spirit of the law. When you accept that jet, you own it. If you break it, you can't point at your little brother and say "he made me do it."



Lt. Steven Halsted

inside approach

Volume 38, Number 11 November 1993

Then, I Smelled Fuel 2
By Lt. Burl Amsbury

OK, OK,... I Messed Up! 5
By Lt. Tom Kirchoff

The Chief's Hurt! 6
By Lt. Greg Upright

If I Had Only Known... 8
By LCdr. James A. Summers

Whose Idea Was This, Anyway? 10
By AMSC(AW) Timothy Watters

Inaction Speaks Louder Than Words 12
By Lt. Rick Loan

The Ice Fog Cometh 14
By LCdr. John Geragotelis and Lt. Kevin Gish

The Air Show Wasn't Supposed to End Like This! 16
By Cdr. Carl Braun

see page 2

see page 16

see page 20

see page 28

Too Close to the Scenery 20
By Peter Garrison

Boomers and a Bad Radar 22
By Lt. Mark E. Schimpf

Watch That Tanker! No, Watch the Prowler! Now, Look Out for the Hornet! 26
By Lt. Kevin King

Mmmm-m! Good Wings... Nice and Crunchy! 28
By Lt. Pat Connelly

A Milk Run Gone Sour 32
By LCdr. Jim McClean

DEPARTMENTS

Bravo Zulu 24
Letters 30
Vultures' Row IBC

On the cover: A CH-46D of HC-6 hovers over the flight deck of USS *John F. Kennedy* (CV 67) during Desert Storm operations in the Red Sea. Photo by PH2 Charles W. Moore

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• POSTMASTER: Send address changes to *Approach* Magazine, Naval Safety Center, 375 A Street, Norfolk, VA 23511-4399.

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Approach is a monthly publication published by the Commander, Naval Safety Center. Address comments, contributions and questions about distribution and reprints to:
Commander, Naval Safety Center
375 A Street, Norfolk, VA 23511-4399
Attention *Approach* – Code 71
Telephone: Commercial (804) 444-7416; DSN 564-7416

Then, I Smelled Fuel

PH2 John Bivera

By Lt. Burl Amsbury

I studied my scorched A-6 from my sprawled position on the flight deck. The plane sat amidst a few remaining campfire-sized flames.

"Hell," I thought, "*that* plane is down. I wonder if they've got a spare." I never found out because, as was carefully explained to me, it was rather a moot point.

Three short hours before, my BN and I had briefed and walked for our first-ever night cat shot and trap. We had done well during the day portion of our FRS CQ, banging out six traps and working as a team. Since we were both Cat I FRS students, it had been a learning experience for us. We felt ready to take on the ultimate challenge of landing on the ship at night.

Everything went fine at first. We didn't even have to worry about timing because Marshal told us that ours would be a manual commencement. Since we marshaled IMC, it was no wonder that we quickly noticed an OFF flag on the VGI (secondary attitude source). However, it seemed to agree with the ADI (primary attitude source), so we weren't terribly concerned. We decided to tell our CATCC rep anyway, though.

Then we heard a similar, but more serious complaint from one of our colleagues. His ADI had frozen off the cat. My BN and I agreed that, given IMC, a questionable VGI, the now-distinct possibility of an ADI failure, *and* our unavoidably low experience level, the sooner Marshal called us down, the better.

After we began the approach, everything went as planned until we actually trapped. The right generator was jarred off-line, causing the canopy to pop open and the alignment to dump. Now things began to happen very quickly. Since everything we were doing was new to us, it all seemed to require more brain power than it should.

I turned out the external lights, raised the flaps and slats, and closed the canopy. My BN raised the hook, folded the wings and made sure that the Boss knew we were down. We were taxiing already.

My BN said that we needed another alignment while I struggled to follow the yellowshirts with some semblance of composure. They parked us behind the island and got a troubleshooter to us right away. He said that he could swap out our VGI for the VGI in the plane that just went down with a frozen ADI.

While we waited for him to retrieve the new VGI, a grape suggested that we could hot-refuel before the troubleshooter returned. We agreed and carefully worked through the checklist, which includes unstrapping and closing the canopy. We waited like this for several minutes without refueling.

The troubleshooter came back and since we weren't refueling, we opened the canopy for him. Things were looking up, or so it seemed. We were going to get the plane fixed, refueled, and then launch for more of those night traps.

"Just like the simulator," we told each other, "at least until we got on deck." Although we had been warned, we failed to recognize that just being on the flight deck is more dangerous, especially at night, than landings. Furthermore, there are no simulators to prepare you for the flight deck.

As I leaned back to allow the troubleshooter to finish his work, I caught a movement out of the corner of my eye. I glanced to the right and aft of the plane to see a huge spray of liquid shooting straight up. I didn't know where it came from. It looked like someone had pointed a fire hose skyward and turned it on full blast. At the same time, I noticed that the wind was going to blow the spray right over our cockpit. Then, I smelled fuel.

The atomized cloud of JP-5 descended, centered on our Intruder. Our aircraft was in exactly the spot where the fuel came down. The engines, which were still at idle, ignited the mixture of fuel and air. Yes, with the canopy open and the troubleshooter working, the deck crew started refueling. Observers said the explosion was quite impressive. A sudden surge of fuel below combined with a weak point in the refueling hose caused a pinpoint hole to open and spray fuel upward.

The next few seconds are only snapshots in my mind. I remember seeing an orange wall in all directions, diving head-first out of the cockpit, and being stopped short in midair because my mask was still plugged in and latched on both ends to my helmet. I was helpless with terror, on my hands and knees, as I glanced down at a burning puddle of fuel in my mask, which was now hanging inches from my face. I was furious when the fire enveloped my right hand and kept burning even when I beat it against the flight deck. One brave soul jumped on my legs to extinguish the flames. There was a look of excruciating pain on my BN's face as he lay on the flight deck nearby.

If these images don't get your attention, drink some coffee and read this article again. There are clearly lessons to be learned. One is obvious: we should have maintained tighter control over what was happening to our plane, when it was happening, and who was doing it. While the troubleshooter was working, we should have turned the fuel-ready switch off. Although it would not have necessarily prevented the mishap, it is a good practice. We should have simply *told* the purpleshirts to wait, anticipating the possibility that they might have been ready to refuel us before the troubleshooter was finished with his work.

We allowed a checklist to be interrupted. At the time, we felt that the hot-refueling checklist was done because we went through the entire NATOPS procedure, finishing with, "Boarding ladders...down."

However, the checklist wasn't really done. We had not actually refueled. Some lists should not be considered finished until the action for which you are preparing (hot-refueling in this case) is completed. This checklist was interrupted because we stopped to watch the troubleshooter.

Another lesson—one that shouldn't have to be relearned—is that your flight suit and gloves are fire-retardant, and they work. Of course, these pieces of clothing won't do any good if you don't wear them properly. My gloves had the first finger and thumb cut off for better feel on the controls. My right glove was crispy when I recovered it, but the only part of my hands that were burned badly were my thumbs and first fingers.

I now turn the collar of my flight suit up when I strap in. That's what it was designed for. As a result of the JP-5 bath and subsequent exposure to flames, the back of my neck was badly burned. The only other significant burns I received were on my legs, where heat from lingering fires penetrated my G-suit and flight suit. Those burns healed first.

I've changed my habits slightly since the fire. I never strap in until I have to, and certainly not during hot-refueling. I don't open my canopy on the flight deck unless I have to. On the night of the fire, the hose burst near the catwalk, no closer to our plane than to the one

next to us. If the purpleshirts had been refueling *that* plane, instead of ours, the result would have been the same for us, except that we would have probably been strapped in. Then, we almost certainly would not still be flying.

Now, on start-up, I delay strapping in until the engines are running and the canopy is closed. When I am not strapped in, I keep my mask attached to only one side of my helmet, which gives me the option of getting out of the cockpit quickly without having to detach my mask, and I can still communicate.

Don't forget to brief hot-refueling in detail before you walk. When you do, don't forget to mention that the best emergency exit for A-6 crews may be all the way across to the other side. That's one thing we did right, and it paid off. If my BN had jumped out from his side, on fire, he would have landed in a puddle of JP-5. As it happened, he was more severely burned than either the troubleshooter or me. If his burns had been worse, he might have died.

What can we do to avoid such mishaps? Besides changing habits, squadron SOP should be reviewed. We now stipulate that if the grapes position the refueling hose near the plane before actually beginning to refuel, the plane captain must make sure that the nozzle is clearly visible to the BN, and the BN or pilot must signal that the hose can be connected to the aircraft. This policy prevents a situation in which the aircrew think that the hose is connected but not charged when it really is.

I have submitted a NATOPS change that recommends modifying the hot-refueling checklist. I recommend placing the fuel-ready switch to "ground" as the final item on the list. The step is already on the list, but not as the last check. Placing the switch to ground provides power to the ground-refueling panel, signaling the flight-deck crew that the aircrew is ready to refuel. With this step in another part of the list, refueling might start before the checklist is complete. I have also submitted a post-hot-refueling checklist; there isn't one in the A-6 NATOPS. My proposal is specifically for the Intruder, but it might be adaptable to other types of aircraft.

1. Fuel-ready switch...off
2. Refueling-valve manual-control handle...normal
3. Shoulder harness, lap belt, leg restraints...fasten
4. Ejection seats...as desired
5. Emitters...on/as desired
6. Boarding ladders...up and locked

Of course, checklists do not an aviator make. They are tools of the trade and like any tool, they can be misused. That night, my BN and I made more than one mistake, some of which you might not make. However, some were common errors. Do you make unintentional mistakes, perhaps without even thinking about them anymore, just because that's the way you've always done it?

Some checklists are worth reviewing. Some habits are worth changing. ➤

Lt. Amsbury flies with VA-52.

This author has made some outstanding recommendations to prevent the same situation from happening again. Let's factor in some other people who may play a major preventative role. How about the troubleshooter who could have been trained in the requirements in the NATOPS for the aircraft and refueling that do not allow the canopy to be open during refueling, which starts when the nozzle is hooked to the aircraft receptacle.

And what about the fact that AIRLANT/AIRPAC 3100.4A only allows simultaneous fueling and maintenance to be conducted only after the CO gives his approval?

The troubleshooter isn't the only one who could have helped prevent this incident. The plane captain, refueling crews and any other ground crews working about the aircraft must be included in this important training.

As a result of this article's submission, NAVAIR will be able to update the newest version of the Refueling NATOPS in five different locations to read, in effect, "Simultaneous maintenance and refueling shall not be conducted."—Lt. C.E. Shirley, NAVSAFECEN Air Operations Branch Head.

OK, OK, ...I Messed Up!

By Lt. Tom Kirchhoff

I was holding in marshal for my first-ever night trap. And like every other night sea story you hear, the weather was bad and it was the darkest night I'd ever seen.

I was in the clouds at about 7,000 feet. My nerves were starting to work on me. To top it off I was starting to get the first indications of vertigo.

"Vertigo is starting to set in," I told my right-seater.

He said, "Roger."

After a couple of seconds that seemed like a lifetime, I collected my thoughts and decided to secure the anti-collision lights. My No.1 ECMO observed the action and said, "Roger that."

Several minutes passed as did several thoughts about heading to the beach. Then we got the call. Mother was ready to reclaim us. We started down, leveled off at 1,200 feet, dirtied up at 1,000, on-speed at six to an OK 3-wire. I sat in the wires at MRT with the boards in and laughed uncontrollably for a good three-count. My right-seater thought nothing of this, as he'd seen this behavior before. This is where the trouble began.

After the smoke cleared from my helmet, I secured the external lights, cleaned up the jet and got ready to taxi forward. My thoughts at the time were, "Gee, I'd like to take a couple of minutes to reflect on what I just put myself through!" But, that wasn't going to happen.

The yellowshirt taxied us up to the cat. I said, "Rats," and pressed on. We rogered the weight board, completed our before-takeoff checks, taxied into the shuttle, and took tension. Yes, it happened just that fast! I ran up the engines, completed the takeoff checks, wiped out the flight controls, and asked if the other aircrew members were ready. Everyone acknowledged as I raised the cat grip.

"External lights on." Yes, no, sort of, all but the anti-collision lights I forgot to turn back on. I freaked out for a split-second. Then I realized it wasn't a big enough problem to take my hand from the throttles at the time. I could turn the anti-collision lights on when we were safely airborne.

Boom! Down the stroke we went. Airspeed and engines were looking good. The mighty Prowler was removed from the steel deck with a force known only to those who have been there before.

Airborne, climbing into the black abyss, landing gear up. Airspeed and altitude slowly increasing, passing 200 feet. Ignorantly feeling comfortable, I followed the uncontrollable urge to let my left hand reach down, without looking, and turn on what I thought was the anti-collision lights.

As I flipped the switch, the engines moaned with rpms coming down. I immediately took my hand from the switch, reached for the throttles and jammed them forward. The engines responded to my demand without hesitation as they spooled up to mil. My focus shifted from screwing around to climbing the jet away from the water.

After we were confident the aircraft was performing normally, the instructor ECMO and I looked at each other with a sort of "Tool Time" expression as he said, "What was that?" I thought about his question for a few seconds as we leveled off and turned downwind.

Knowing that I was messing around with some switch at the exact time of the decel, I decided that the area surrounding the switch would be a fine place to search for the problem. Collision switch off (imagine that). Approach power compensator (APC) stand-by. Exactly where it should be if one were to turn the auto-throttles on, then override them by forcing the throttles forward. I turned the APC off and anti-smash on and proceeded with the mission at hand.

ECMO 1 and I discussed the incident back in the ready room. We decided there were more important things for a pilot to do right off the cat than playing with switches (like flying the jet, for instance). ◀

Lt. Kirchhoff was in VAQ-129 at the time of this incident. He is currently assigned to VAQ-132.

The Chief's Hurt!

By Lt. Greg Upright

Things couldn't have worked out better if we had planned it. We were just starting our brief for another "exciting" SSC mission off the Philippines when word came that the event before us had not had the required hits to sink the target hulk. We would be sent out to finish the job.

Our loadout for the SSC mission had been 11 Mk-76s and a smoke. After clearing the sector, we were going to bomb the smoke. With a change in mission we exchanged the blue bombs for 12 Mk-83s.

Live bombs to an attack guy is like ambrosia to the gods: we live for it. The weapons-planning books came out and after some furious planning, we were ready to do battle with the barge that wouldn't sink. The only hitch was that our A-6 had not gotten its new ordnance. But the load was "in work."

After waiting for a nearly unbearable amount of time, we got the word to walk to the jet. On the way out, Maintenance Control reminded us that the ordies had not finished with the new loadout and that, by the way, the plane was being respotted on the flight deck in the six-pack.

When my stick and I arrived at the plane, it was spotted in the six-pack, but the flight-deck crew still had the tow tractor hooked up to it. The Intruder was also broken down, so I assumed that the respot had been completed. The ordies were swarming over the ordnance, putting the finishing touches on the bomb load. The bombs were loaded, but they weren't wired for release yet. This was going to be a down-to-the-wire finish.

Since the respot seemed to be completed, I walked over to my side of the aircraft, hung my nav bag on the landing gear up-lock hook, and started my preflight. A recovery was in progress and the flight deck was the normal confusion of noise and motion. I wore my helmet with the visor down.

As I approached the A-6's nose, I saw the ordnance chief under the right wing, checking the bombs on station 4, near the right mainmount. At that time, the deck crew started to move the aircraft to its final position, which was a tractor's length forward of its current position. The respot couldn't be completed until the recovery was finished, since the tractor would foul the deck if it moved further forward.

My assumption that the respot had been completed was only partly correct. Since the move was so short, I figured that I might as well continue with my preflight. Just as I reached the right side of the radome to check its fasteners, the nose strut made a peculiar motion like the plane had hit a bump, or someone had done a quick brake check. The plane stopped moving.

I backed away from the nose to see what the problem was and, turning around, I saw the aircraft's right mainmount come to a stop with the ordnance chief caught by his waist band under the wheel. He didn't look like he had been run over, but he was yelling loud enough to drown out the engine noise from the recovering aircraft.

I ran back under the wing to another ordnanceman, who was trying to tug the chief's pants out from under the wheel. I realized that until the aircraft was moved forward, the chief wasn't going anywhere. I signalled the tractor driver to move forward, but someone had already got to him because he started to inch the A-6 forward.

After the chief was freed, he didn't get up. I saw blood coming from his legs. Looking closer, I saw that one leg was crushed almost flat. He had been run over by an airplane that weighed 58,000 pounds!

A medical-emergency team arrived and my pilot came over to see what was happening. He took one look at the chief and canceled the flight.

The can-do spirit of our squadron got in the way of common sense. The last-minute switch in missions, combined with the drastic change in ordnance, made this event time-critical from the beginning.

Letting ordnancemen and aircrew around a plane that is not chained and about to be moved was a big mistake. I shouldn't have started my preflight, and I shouldn't have continued my preflight after the plane began moving. Beginning the walkaround gave an unspoken OK to continue ordnance loading, even though we all knew it was wrong. If any one of us – the taxi director, the pilot, the plane captain, the ordnance chief, or *me* – had insisted that the area beneath the plane was cleared before moving it, the chief would not have been hurt. We were so focused on getting the mission out that we let safety take a back seat, which cost the chief his leg. ◀

Lt. Upright flies with VA-304.

If I Had Only Known...

By LCdr. James A. Summers

I lucked out – I was scheduled for a good-deal ACM hop. Lately, it seemed hard to get those ACM hops because many aircrew were out of ACM qual, or lack of adversary aircraft. But today was our day, or so I thought.

It would be a 2 v 1, but the bogeys thought that two A-4s would be available, so we briefed a 2 v 2. Our section of F-14s would fly an attached TARCAP in support of a simulated strike package. Our brief was thorough and included contingencies, ROE and departure procedures.

During the plane-captain checks, our aircraft went down for a fuel leak so we manned the spare. I told my wingman to launch because one A-4 was ready to go. The lead A-4 was also running late. He told us he would launch as we taxied out.

During our taxi and takeoff checks, I scrutinized the turn needle by moving the rudder pedals. The needle wavered, which I thought came from the small nosewheel-steering movements. We took off and headed for the practice area.

We finished our ACM checks and found our wingman at the south station. He and the wing A-4 had already finished a couple of engagements and were waiting for us to start the next one. The first run went great, with separate radar locks and two bogey kills. After the knock-it-off, the wing A-4 had to go back because he was at bingo fuel. We set up for a 2 v 1.

I knew this run was not going well because neither F-14 could locate the A-4. Our radar had a couple of hits to the west so we checked left. We still couldn't find the bogey and shortly heard "Atoll" on my wingman. I got a tally on the A-4 and made a hard left turn to minimize angles as the bogey maneuvered toward us.

The fight quickly developed into a rolling scissors, the A-4's arena. With the bad start and flying a heavy F-14 with 14,000 pounds of fuel, including external tanks, I soon found myself on the defensive.

I pulled to force an overshoot as the A-4 was attacking high to low. The bogey overshot low and out to my two o'clock, but I didn't have enough airspeed to maneuver my nose as the A-4 zoomed up again. I was surprised to see him with enough airspeed to go vertical, so I knew I needed knots fast. My RIO was thinking the same thing and called, "Unload for knots." I quickly unloaded and watched the A-4 arcing overhead toward our six.

When the A-4 had about 40 degrees to go, my RIO called, "250 knots. Let's come back." I started a hard pull into the bogey. As my nose was just coming above the horizon, I retarded the throttles to Mil and called, "Flares," as the A-4's nose came on.

LCdr. Bert Hoenniger

The A-4 pilot acknowledged my call and began to pull lead to close in for a gun shot. At this point, I was about 50 degrees nose high, 80 degrees left wing down, 150 knots and 13,000 feet AGL.

"Guns," the A-4 pilot called at the same time I initiated a guns defense. I was trying to roll my aircraft to point the right wingtip toward the A-4 to reduce our planform. I had full left rudder, about half left stick, while maintaining aft stick.

The F-14 departed violently as soon as I moved the controls. In seven years of flying the Tomcat, I had never felt anything like this departure. For two or three seconds, I had no idea what the aircraft was doing. If anything, I felt like we were going end over end, like a football. I neutralized all controls and heard the A-4 pilot call, "Knock it off," but I was too concerned with the aircraft to respond.

After another two or three seconds, I could see that the sky was above me but that there was a lot of yawing motion. My RIO started to say something, but I cut him off with, "Stick forward, neutral lateral." I noticed that we were about 25 degrees nose low, so I went full stick forward, hoping to keep the nose down. I also checked the turn needle and saw that it wasn't working; it was centered. I never thought to check the HSD for the spin arrow. I felt we were yawing to the right and I quickly – and correctly – put in full left rudder.

The aircraft immediately sliced up to a flat attitude and stayed there. Seeing that rudder alone was not enough, I considered putting the stick in the direction of the yaw, but I also realized that we were already in a fully developed flat spin. I knew we were close to 10,000 feet.

"We're going to have to get out," I told my RIO.

"Roger," he replied, "here goes the canopy." The canopy left quickly and after about two more revolutions (we were spinning about 180 degrees per second), I was ejected.

My RIO's seat malfunctioned, and he was killed. The time from the departure to the ejection was about nine seconds.

We had experienced an inertia-coupled departure. [*Coupling results when motions in more than one axis interact. A guns-defense maneuver, using full rudder, followed by full, coordinated lateral and aft stick, produces a violent coupled departure that requires immediate corrective action by the pilot. External stores add to the departure's severity by decreasing directional stability and increasing inertia.—Ed.*]

The lessons learned on this flight were very costly. Foremost is the danger of this departure. The intensity of the maneuver and the short time before we entered the spin was amazing. During high-yaw rate departures (more than 50 degrees per second), the stick must be quickly put in the direction of the yaw. However, the pilot must use caution because, in other types of departures, this input would only make things worse.

Avoiding the flight regimes that can rapidly produce high yaw rates is critical. Also, be sure to pay special attention to checking the turn needle, which can fail when you least expect it. Recently, a pilot in our squadron experienced the same failure and had to check the needle three times before he was convinced it wasn't working.

I'd like to finish my story by reemphasizing the importance of maintaining your NATOPS knowledge. I have been an F-14 NATOPS officer twice and was always proud of my knowledge. Somehow, that critical paragraph on coupled departures had slipped by me. From my discussions with other pilots, I know I'm not alone. I would never have attempted the maneuver if I had only known about the danger involved. If I had only known... ◄

LCdr. Summers flies with VF-201.

Whose Idea Was This, Anyway?

PH1 R.K. Hemmerly

By AMSC(AW) Timothy Watters

Our det was ready for a North Atlantic exercise with two CH-53Es, 36 people and three tons of support gear. However, tensions in the Arabian Gulf put us on a 24-hour alert. After several days of bringing in sea bags and taking them home again, we stood down to a 72-hour alert.

Then out of the blue, our ops officer came in with a burst of energy, telling us to load the aircraft and pack our bags. We had to be on the ship, USS *Shreveport* (LPD 12), which was in Morehead City, and under way by 1800! We had only seven hours to do all this preparation, a real all-hands effort.

We needed five more planes from two of our sister squadrons, including three CH-46s for our people and their baggage, and two MH-53Es for additional cargo. We also had two flat-bed trucks to carry our det's cruise boxes. By 1730, we were orbiting the pier, ready to come aboard.

Our personnel and parts had arrived, but the ship was still taking on supplies and Marines. We had to divert to MCAS Cherry Point to wait for a new overhead of 2030. Once we had landed, we quickly checked the weather and found a line of severe thunderstorms, which was expected to strengthen as it moved out over the water.

Looking at the doppler radar was like Dorothy looking out her door when she arrived in Munchkin Land: the radar showed the biggest, brightest blues, oranges and yellows I had ever seen. The storm passed with 55-mph winds, lightning damage to the tower, and flooding. I was glad to have my bags with me for the overnight stay.

We waited while the OINC and the other HAC discussed the situation. I knew something wasn't right when I saw the pilot of the second helicopter – a highly respected, experienced pilot, and one of the most knowledgeable aviators in the H-53 community – getting frustrated. He was pointing out that the only common-sense option was to RON and pick up the ship off the coast the next morning. But we got the call to launch, anyway.

Things went downhill quickly. The storm was now out to sea, along with the ship. It was night and everyone was exhausted. We all looked at each other thinking, "Can you believe this?"

Looking at the doppler radar was like Dorothy looking out her door when she arrived in Munchkin Land.

At 2030, we were in the air heading for mother. Approximately 20 miles out in tight formation, we entered the storm and immediately lost sight of Dash 2. The forecasters had hit this one right on the nose; we had constant lightning and torrential rain. The lightning caused a white-out effect in the cockpit, like holding a flashbulb to your face and clicking the shutter button on your camera.

We arrived over the ship without knowing where our playmates were. The deck was still clobbered with gear, people and helos. One H-53 was in starboard delta. We reluctantly took our place in port delta, still wondering where Dash 2 was. Visibility was one-quarter mile at best, so we held at 500 feet. Although we were talking to Dash 2, we couldn't see them. An intense lookout doctrine, which was a must, was very hard in the lightning, rain and low ceiling. They were out there somewhere. After the third go-around, something felt strange.

I went up to the cockpit and looked at the ball. I was about to speak when the HAC yelled that he had vertigo. The copilot quickly took the controls and steadied us up. I promptly took my place in the jump seat for backup scan, which left only one crewman to maintain the lookout.

I had to keep looking down or close my eyes to keep from getting vertigo myself. The copilot, meanwhile, kept his eyes plastered to the dash. Suddenly, the HAC called for power. We were descending at 300 fpm. The collective kept coming up, but we kept going down.

After what seemed like a lifetime, with full-up collective, we leveled off at 100 feet. I remember seeing the reflection of our lower antismash light off the water as I braced for impact. By this time, my head was filled with names for the guy on my right.

I finally said, "Let's get the hell out of here!" At this moment, No. 2 called – he had been dead set against this from the beginning – to say he was heading back to Cherry Point. His call finally brought home the fact that this was not going to work. We had been out for two hours, and the ship was still offloading the MH-53E on deck, which had problems of its own, including a cockpit fire. After 30 minutes, a wrong course, and another line of thunderstorms, we finally landed. As we dried off, Dash 2's HAC debriefed the flight with the OINC.

Finally, we decided to meet the ship the next day. Once we were onboard, we heard horror stories from the ship's crew. I told them that I would much rather have been on deck than in the air.

I've thought about that day many times, asking myself why we had gotten into such a bad situation, and what lessons we had learned. You can doubt the weather guesser if you like, but never doubt the weather radar. In my view, the desire to look good doesn't overshadow the safety of the crew and the aircraft.

Listen to others around you, then decide what to do. Not once did the OINC consider anything that was brought to his attention. The only thing he focused on was proving that we were "true professionals." ◀

AMSC(AW) Watters was with HC-2 at the time of this story. He is now assigned to the CFLSW Det at NAF Washington, D.C.

Inaction Speaks Louder Than Words

By Lt. Rick Loan

It began as a typical day in the VP Navy. We arrived at Maintenance Control at 0800 for our reposition flight to Puerto Rico, followed by a second-period TORPEX the next day. The maintenance chief told us that the plane was down because the port fuselage bleed-air valve was stuck closed, but it would be a "quick fix" and the AMEs were already on it.

Following a brief at the ASWOC and a trip through Maintenance Control, we arrived at the aircraft to find the access panels for the bleed-air valve removed and no maintenance personnel in sight. We called Maintenance Control. They said that they were waiting for parts, which would take about 30 minutes. We decided to go ahead and preflight.

We completed the preflight, and the crew was ready to brief at the plane at 1100. Maintenance was still having difficulty with the valve change, so everybody decided to break for lunch. My TACCO and I grabbed some lunch in the gedunk and headed for the wardroom to discuss our options.

The previous day, our crew had thoroughly discussed the entire TORPEX scenario, including crew coordination, communication, LOC, DRTs, SHARPS, plot stab, and attack phase. We were also concerned about crew rest.

TEMADD-fund reductions required as much cost cutting as possible so the trip had been planned for only one night at Roosevelt Roads. The crew was looking at a second-period TORPEX, followed by debrief and the flight home. Total flight time would exceed six hours, so NATOPS required 12 hours' crew rest. Thinking conservatively, we determined we had to be off the deck by 1300 to allow time to postflight and get a TORPEX brief at the Roosey ASWOC.

We took off around 1300 and were on our way, relieved to know we wouldn't have to shuffle TORPEX periods or arrange another night at Roosey. On top of Ormond Beach VORTAC, ATC cleared us direct to Grand Turk, then flight-plan route. The NAVCOMM gave us a heading, and my 3P made the turn. When he rolled out, our headings disagreed by 60 degrees. We asked the NAVCOMM to look at the inertials and figure out what was going on. He said he would check it out and advised us the OMEGA was flashing a warning. About that time, the radar operator told us the radar was hosed up, and he could not adjust the tilt below 10 degrees up. By now, the 2P was in the cockpit, and we were beginning to discuss options.

The weather brief indicated a squall line over the Bahamas and heavy thunderstorms over Puerto Rico. Further troubleshooting by the TACCO, NAVCOMM and IFT indicated something was malfunctioning and affecting the inertials, Omega, TACAN and VORs. This decision was easy. We contacted ATC and requested clearance back to Navy Jacksonville.

The Operations Officer met us on the hangar deck and asked what was up. We told him what had happened and that we were canceling the mission. He said we had another aircraft, and arrangements were being made for an additional night at Roosey. This would eliminate the transit home after the TORPEX, so we wouldn't need 12 hours of crew rest.

The preflight was quick, with no problems, and we were off the deck in two hours. At about the point we had aborted the previous flight, the pilot's windshield had cracked, leaving half a dozen lines across the windshield. Following NATOPS, we determined the crack to be in the outer layer and put on our helmets, but we had another problem: With helmets on, the flight station was unable to make any radio transmissions to ATC, using hand-held mikes. This had been noted in the ADB, but we had decided it would not be a factor. During the abort home, we managed to communicate with ATC via our NAVCOMM.

Again, the ops boss met us on the hangar deck and said that we had yet another aircraft. He was also making arrangements to slide our TORPEX period to later in the day. My TACCO and I were shocked. By now, we were nine-and-a-half hours into our day, but decided to give it a try.

Our third aircraft was ASW down, and the radar had an undetermined problem. For the next two hours, as we tried to get the aircraft up, all but one of my normally gung-ho crew members questioned why we were continuing our attempts to go. I knew they were right and had wanted to cancel the mission after the last two aborts. The clincher for me was when my 3P brought me the weather update.

The weather was forecast to be low ceilings with thunderstorms on final, and the PAR was NOTAMed down. Considering we would be in the 16th hour of our crew day following two aborts, three preflights and we still had a questionable radar, I decided shooting an approach in bad weather at night wouldn't be very smart.

My TACCO and I decided to cancel the mission and headed for the duty office. When we arrived, the SDO was on the phone with the ops boss, who was trying to line up another aircraft and told us we still had time left on our crew day. I had the duty officer tell him we were through.

After sleeping on the day's events, I was convinced we had made the right decision to cancel the mission. The problem I had was that I had not stuck with my previous two decisions to cancel. I had responded to what I considered was indirect pressure from ops to press on. I approached the ops boss the next day and told him he had simply made the decision to cancel too difficult and, in effect, had interfered with my crew's thought processes. He was very receptive to my comments and reiterated the command's policy that "Safety is paramount. No mission is so important that we can't do it safely." He told the CO of our conversation and two hours later I was in the CO's office. He backed my decision to cancel the mission, but felt the only pressure I was under was peer pressure. He also reiterated what ops and he had said a dozen times before.

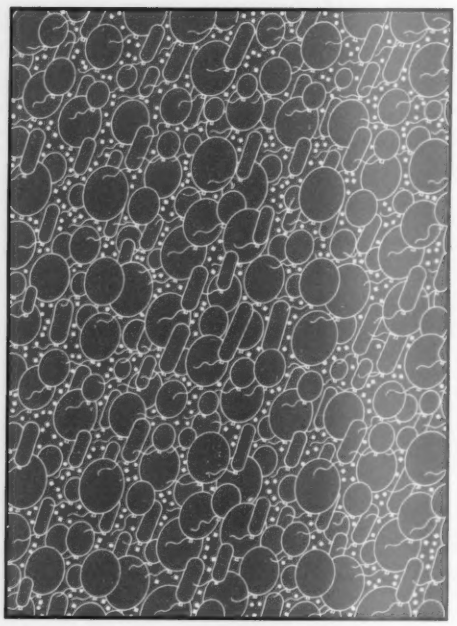
I walked away from that day feeling very comfortable with the way I handled the situation and the reception I received.

The lesson learned was that, if I sense any pressure from ops, maintenance, or training to continue a mission I want to cancel, I must bring it to their attention immediately. I bet that they will immediately support my decision. To all ops bosses, maintenance officers and training officers: inaction speaks louder than words. ◀

Lt. Loan flies with VP-30.

The Ice Fog Cometh

By LCdr. John Geragotelis
and
Lt. Kevin Gish



LCdr. Geragotelis:

Twenty-five thousand scattered, current observation and one hour forecast. Great! Let's bump some knots. After all, we've been stuck on the boat for five weeks, so it would sure be nice to get home early tonight.

That's how we felt on the flight from Chicago to Rapid City, our last pit stop before Whidbey.

"Tower, AJ 620 would like a visual straight-in, but I can't see the field." (I should have been wearing my cheaters.)

"Roger, AJ 620. All approach lights are coming on. We have some fog in the area." There's the rabbit, the VASI, a little flare to land, now a quick turnaround, and we'll be on our way.

Fifteen minutes later, I was standing at the weather desk preparing to file. "Hey, it looks like that fog is really moving in."

"Yes, sir," the forecaster said, "it's been rolling in and out WOXOF all night. It hasn't stayed more than five minutes, though."

"Oh, really? I've got a playmate about 30 minutes out who would probably like to know that."

"Yes, sir. We'll take a special observation. This time it seems to be lasting a little longer." [*To be continued after "Fish's" story*]

Lt. Gish:

Twenty-five thousand scattered, intermittent 100 obscured, one-eighth mile in fog. What? Let's throttle back and find out what's going on here. Can we land at Rapid City Muni? Sure, but they won't be able to start us. All they have is an ILS approach, and the weather may not be any better.

Can we make it anywhere else? Malmstrom is just below bingo profile if we start right now (on deck with 2.0), and we don't know the weather.

We were about 15 minutes out. Our best option was to press on max conserve.

"Approach, what's the weather now?" The weather was still 100 and one-eighth, but I could see the bright flashing sequencers.

"We'd like to try the ASR."

"Sorry," Approach replied, "it's below mins."

The fog was thicker in some spots than in others. It was strangely reminiscent of Whidbey, when the fog plays hide-and-seek with half the runway while leaving the other half basking in the sun.

This thin, translucent blanket appeared harmless as I gazed through it at all the lights on the ground. Of course, my seasoned ECMOs quickly reminded me that "just because there is seemingly sufficient vertical visibility, one should not deduce that upon penetration, lateral visibility will remain adequate."

I decided it was time to depart from overhead and take a gander from the approach perspective. If at any time I lost sight of the runway or approach lights, I would wave off.

"Approach, AJ 624 requests a visual straight-in."

"Sorry, the field is not VFR. Do you mean a contact approach?"

"Yes, that's what we'd like."

"Sorry, you need at least one mile vis to do that."

Our next option was to squawk emergency and try to land. It did not come to that as our radar controller agreed to help us with a surveillance approach even though the weather was below mins. The visibility, whatever it was, was good enough to maintain sight of the runway throughout the ASR approach. We landed, and as we taxied off the runway, we waved to Germ, who was obviously holding short for takeoff.

LCdr. Geragotelis:

One hundred and one-eighth. Blowing in and out all night. Thick right now, but too damn cold (13 degrees F.) to stand by the jet and wait. They call it ice fog. You can actually see little ice slivers glimmering in the fog.

The jet looks good. Let's start it up and wait until this stuff clears. Engines are on line. Get that defog on. I can't see squat out of my windscreen. The visibility is about one-quarter mile, so let's have the transient guys lead us to the hold short. We'll wait there until this ice fog leaves.

Arriving at the hold-short area, we spotted an aircraft taxiing down the runway toward us. It's Fish! He made it in. This stuff must be getting thinner. We all waved as he taxied by, but our joy was shortlived because inside my cockpit a yellow L GEN light was shining in my face along with its faithful companion, a flashing Master Caution light.

"No, guys, it won't reset, probably because our left engine isn't running."

I hadn't noticed anything unusual, but with the defog blasting, it was hard to hear. It reminded me of the trainer, the old, misidentified generator failure (actually an engine failure). We called for back taxi.

I cleaned up the flaps just in time to gasp in disbelief. Yup, the right engine dropped off line, leaving us sitting silently in the cold, dark night.

The transient alert crew returned a few minutes later to lower our boarding ladders.

"We must have taken some bad gas," I yelled. "Maybe it's a frozen fuel line. We'll need a fuel sample."

My heart sank when I looked into the intakes. In front of each engine lay a handful of white finger-sized slices of ice.

"No, I don't think it was a fuel problem," I said. We discovered one-half-inch of ice had accumulated behind the first-stage compressor blades, all within 15 minutes after starting.

The next day, Fish got off OK. But before we launched, we had to check everything our Pratt & Whitney expert could throw at us—filters, traps, lines, fuel controls. All were sound, and the engines were fine. No FOD, probably because taxiing did not require more than idle rpms.

Fortunately, the C-9 with the crew from our boat det diverted to Ellsworth for gas. We asked our guys to borescope our engines, which they did. We spent most of the day checking our plane.

There were a lot of raised eyebrows, but we finally had a consensus from a bunch of stupefied old salts. The super-cooled moisture in the air started to form ice as soon as it entered the compressor. Engine anti-ice, turned on about five minutes after start, was ineffective at idle power.

As ice accumulated on the blades, airflow became more and more disrupted, eventually stalling the engines. In retrospect, one possible cockpit indication may have been the fact that the defog temperature never warmed up because of the abnormal airflow. However, all instruments indicated normal at idle.

We thanked and bid goodby to the wonderful T-line crew at Ellsworth AFB.

"I've seen that ice fog do that to a couple of other jets over the past few years," remarked one of the line crewmen. "One A-6 never even made it out of the line. You guys made it the farthest of anyone yet."

I certainly hope that no one will make it farther than we did and learn about ice fog after they have taken off. ◀

LCdr. Geragotelis and Lt. Gish fly with VAQ-141.

The Air Show Wasn't Supposed to End Like *This!*

By Cdr. Carl Braun

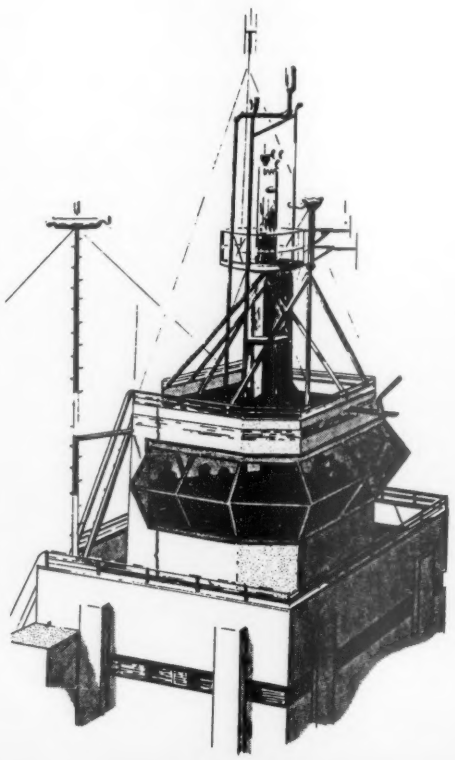
It looked like it was going to be a fine day for a midsummer air show at a Midwestern civilian airport. Preparations for my F/A-18 flight demonstration started with the duty FAA waiver and course-rules brief at 1000. The two briefed diverts included a civilian airport 60 nm away, and a military airfield (with a 10,000-foot runway but no arresting gear) about 65 nm in the same direction.

I launched at 1700 in a completely slick Hornet on runway 6 for the day's last flying event. The weather had slowly deteriorated from clear and scattered in the morning to about 5,000, isolated-scattered and 13,000, broken with about 7 miles visibility in haze. I had a quartering tail wind from the right at about 7 knots.

At first, the air show went well. I included a dirty pass with gear, flaps, hook down, and a flyby to a gear-hook cleanup and a 25-degree, nose-up climbing spiral with flaps up at 180 knots.

The gear indicated all down-and-locked during the pass, and cleaned up and locked normally. I extended the gear and flaps at the end of the show to make a touch-and-go and full stop, and got a nasty little surprise. The green light for the left main gear did not illuminate, the red gear-handle light remained on, and several seconds later, the gear warning tone started. The fuel gauge showed about 3,000 pounds of fuel, which was fairly fat for this point in the show. I told Tower that my gear indicated unsafe and that I would continue my turn to final for them to confirm gear position.

As I extended downwind, I used my third and fourth hands to pull out the PCL. The circuit breaker for the landing gear was in, and the nose gear and right main mount showed down and green. The left main-gear light tested good and the gear-handle light was on. I blew the gear down, but that didn't change anything. I flew by the tower on the southerly heading I was already set up for (crowd and tower to the right). Tower told me that it looked like I had three good extended gear. I asked them to confirm gear position, and they again said it looked like three good extended gear.



I asked them to send some people to the runway who would know what they were looking at.

Thinking a faulty microswitch might well be the culprit, I told Tower that I would make another low pass, this time in the other direction, with the bad gear toward them. I asked them to send some people to the runway who would know what they were looking at. I said that if the gear truly looked down and locked again, I would land (I was already below the emergency bingo profile fuel required to make it to the divert with 1,500 pounds, so I *really* wanted to land here).

Tower told me they had a bunch of pilots out by the runway to take a look. I made a low pass, left side to the observers, and Tower said the gear was about halfway out of the well and not down-and-locked. Bummer. The needle in my fun meter was now really starting to swing left.

I took a steer to my southeasterly divert. My friend, the gas gauge, said 2,200 pounds. The planned military divert did not have arresting gear, and from my now-intimate commiseration with the PCL, it was looking like I most definitely wanted to find some arresting gear for this particular burp with the Hornet.

I asked where the nearest gear was, and Tower told me 70 nm due west, all of it across water! This sounded just a little funny, so I started whipping through the IFR supplement, approach plates and high-altitude chart, as I tried to figure out my dirty divert climb schedule from the PCL.

Ever see the movie "1941" where John Belushi is in the cockpit of the P-41, canopy open, charts blowing in his face and going everywhere? Well, been there, done that.

The field was published under a different name, and, in fact, does not have arresting gear. The tower and I finally figured the closest actual arresting gear was farther away than I could fly at this point, unless, of course, I could clean up and fly a gear-up bingo profile. (I would still have much less than published bingo fuel upon arrival, however).

I told the tower I was proceeding to the briefed divert, which had no arresting gear. Then I tried to see if I could get the gear up so that I could consider going for the more distant military airfield with the cable, which was in the same basic direction.

NATOPS says if you have any gear down-and-locked in this situation, don't recycle the gear. Simple enough.

Right? Since I couldn't get the left gear down-and-locked after the PCL steps, I referred to the guide for malfunctions with the landing gear, which said "Make arrested landing." Uh, oh.

Next step, for a no-cable landing: "Retract all gear." Fair enough, but life isn't always fair. When you normally extend the gear in the Hornet, the mechanical stop (downlock tab) on the landing-gear handle momentarily appears during gear transit, then disappears prior to three down-and-locked. With weight-on-wheels, it fully engages again, preventing you from raising the gear on deck. There is a downlock- override button in case you need to override the downlock in an emergency.

When I had lowered the gear this fateful time, however, the downlock tab had engaged at the beginning of gear transit (normal), but had never disengaged and was clearly visible at the end of gear transit (not normal!). Obviously, this situation was associated with the problem with the hung gear.

I reset the gear handle from emergency down to the normal down position and tried to move the gear handle up, both to attain a clean bingo configuration, and because that was the next NATOPS procedure. I was fairly sure that with the tab in place, the handle would not move; of course, it didn't.

When you blow the gear, it sets the downlock tab, so you have to push the downlock override anyway. The difference in my case was that the tab was in place before I blew the gear. I was about to push the downlock override to raise the handle when I started thinking. My left landing gear was really gooned up—it was stuck halfway out, and the downlock tab was in the wrong position. What did I have to land with now, and what might happen if I pushed that button and raised the gear handle?

If I left everything alone, I would make it to the divert that didn't have a cable, although no one could call me heavy. As the left gear folded back up under the aircraft's weight the left side would come to rest on the wing-tip LAU-7, and I would have good nose-gear steering and a good right brake—probably not too bad.

A year before, as one of our aircraft was landing, its right main gear collapsed, but the pilot kept the aircraft on the runway with nose-gear steering and opposite braking, all the way to a stop.

What would happen if I raised that gear handle? At best, all the gear would clean up (cockpit indications would tell me that) and I could belly-land the sucker as NATOPS recommends. I didn't think, however, that the left gear would come up (post-flight investigation showed I was right). So, I'd probably have nose and right gear up-and-locked, with a left gear hanging down, and that configuration is about as bad as it gets. But I wouldn't really know that. Cockpit indications would only tell me that nothing was down-and-locked, but not everything was up-and-locked. There wasn't anyone around to check me out. I'd have to put the gear handle back down, and if everything worked, I'd be right back where I was now.

If anything more happened to the nose gear or right main gear, I would be worse off, as I probably would not have the tools required to keep the aircraft on the runway. I didn't push that little button.

What else could go wrong? How about NORDO? Perfect. Both my radios began deteriorating (in the

There was no smoke, fumes or fire, and no fuel, oil, hydraulic or other fluid leaks.

receiver) as I was trying to raise the divert's approach. I eventually lost transmit sidetone in both radios (though I still had it on ICS). What a drag. I was squawking 7700 (which I learned later completely cleared out my airspace and approach, just as it's designed to). After much knob and switch turning, recycling and comm BITing, I got the radios back and arranged for a landing with all the appropriate condiments (sirens, flashing lights, and speeding trucks).

I couldn't climb to my published dirty bingo altitude because of a now nearly overcast layer at 13,000 feet. Yes, I wanted to see the ground, especially since I was incommunicado for a while. The gas was holding up fine—well, not fine, but good enough. I received clearance and set up for my final air show feat.

I initially considered landing on the right side of the runway, anticipating left drift when the left wing hit the runway. Not knowing how much braking I would have to do with the good tire, however, or what effect its being canted to the left would have on it, I was afraid of blowing the tire and causing drag to the right. Would it be more or less than the left wing? I didn't know, so I decided to land on centerline. I made a minimum-rate descent and landed with 800 pounds fuel, slightly slow. The left wing tended to drop, but stayed up momentarily with full right stick.

As the Hornet decelerated, the left wing hit the runway and the aircraft started drifting left. I countered the drift using a combination of right rudder (NWS engaged) and right brake (antiskid off). NATOPS says that after emergency extension of the landing gear with good HYD 2A, failure of the normal brakes should be anticipated, but I did not select emergency brakes since I did not want to deplete the emergency brake accumulator while dragging my left wing tip.

I used normal brakes, looking for signs of HYD 2A depletion, at which time I would select emergency brakes. The aircraft had drifted halfway from centerline to the left side of the runway until I determined the correct amount of steering and braking, then tracked straight down the runway.

As soon as the aircraft started tracking straight, I secured the left engine. I stopped after rolling about 4,000 feet. I secured the right engine and the rest of the aircraft systems, and got out by a ladder that the crash crew supplied.

I pinned the nose gear and right main gear, but did not pin the hook because it didn't seem like a good idea to go crawling around under there. I was finished pressing my luck for this day. There was no smoke, fumes or fire, and no fuel, oil, hydraulic or other fluid leaks.

The aircraft rested on its right main mount, nose gear, and left wing tip. The left main mount had collapsed and folded under, with the outside of the mainmount on the runway. The left aft-outboard gear door and the left stab tip were also on the runway. The left LAU-7 was damaged, along with the left wing tip, left aileron, left trailing edge flap, left stab, left outboard aft gear door, its attachment rod, and the left tire.

I called the CO and also called for crash-crew support in moving the aircraft off the runway, and got a flight physical (for MIR purposes). The base had no proper crane or lifting equipment. After discussing the available equipment and best procedures with my squadron, we put aircraft tires on the tines of a forklift and lifted the left wing behind the leading edge flaps longitudinally at the jack point until the mainmount hung free.

The over-center brace was still about 40 degrees from being over center and locked. We attached a nylon line to the left hub tie-down point, pulled forward and out, while pushing the overcenter brace in to get the brace to straighten and lock. I pinned the left main gear and we towed it normally to a hangar. We sent a crew with parts from the squadron two days later, and flew the plane home. It was sitting on the flight line less than a week after the mishap.

Here's a trio of lessons learned that have been learned by many people many times before.

•Regardless of how unlikely a bingo or divert seems, have the basic information at your fingertips. You are too busy in the cockpit during a problem to engage in divert planning—particularly when fuel quantity is your real-time clock.

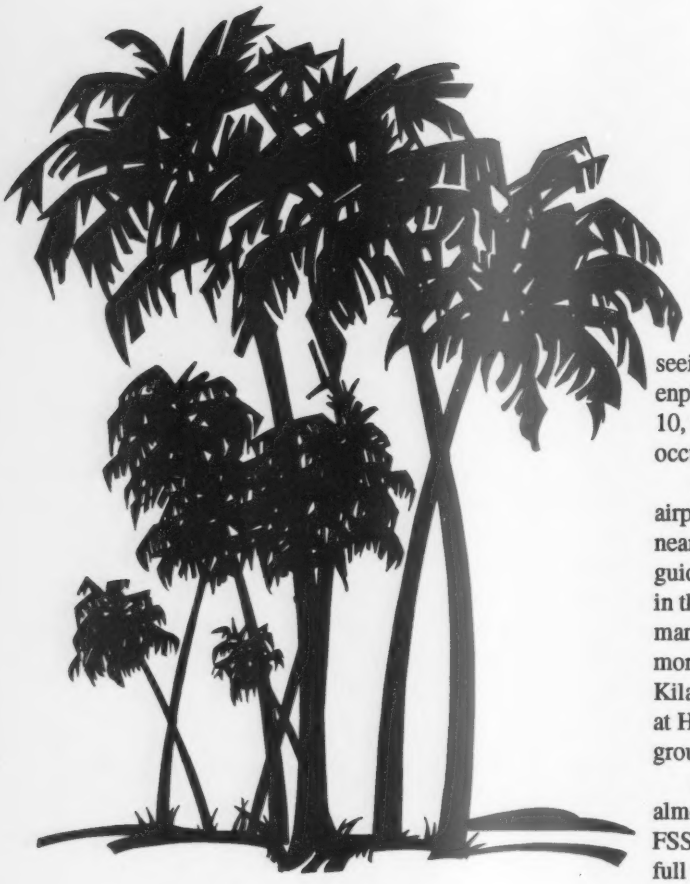
•The NATOPS PCL, though important, cannot go into all the details pertaining to the aircraft systems that can go wrong. You need the NATOPS manual with its broader knowledge to understand the nuances, implications and best courses of action for system failure.

•NATOPS can't cover all contingencies and can't answer beforehand all potential problems and solutions. Knowledge of the aircraft, coupled with constant headwork and decision-making during an emergency, are critical to success. Most NATOPS changes are the result of unforseen lessons learned. ◄

Cdr. Braun is the XO of VFA-136

Hornet mishaps for CY 1993 have identified four USN and one Canadian landings on only one main landing gear. This story highlights the myriad problems that can appear in such a situation and how knowing the aircraft systems cold will lessen the trauma.—Ed.

Too Close to the Scenery



This article is about a pilot who killed himself and eight passengers. Although the mishap investigation found aircrew error as the cause, there is much more to the story. Throughout the pilot's career there were many indications that he would have a mishap. Many people knew his faults, but for some reason that knowledge never followed him.

If you replace phrases such as "Scenic Air Tours" with squadron and "former employers" with training command, FRS, former skippers or peers, you'll find that this scenario exists within naval aviation: adverse information about an aviator is known prior to a mishap, but is either not passed to the proper authority, or is not acted upon correctly.

We would like to thank *Flying* for letting us use excerpts from Mr. Garrison's article.

By Peter Garrison

It seems unexpected that a tour airplane could collide with terrain. After all, touring implies seeing, and therefore VFR operations. But when you're enplaning two million people a year in groups of five or 10, there are many opportunities for the unexpected to occur.

A 1992 accident in Hawaii is a case in point. The airplane was a 1957 Beech 18, a radial-engined twin, with nearly 16,000 hours on the airframe. The pilot-cum-tour-guide was a 26-year-old ATP who had logged 465 hours in the type during eight months of employment. Flight 22, marketed as a "Volcano Special," began with an early-morning departure from Honolulu. After flying over Kilauea Volcano on the "big island" of Hawaii, it landed at Hilo, where the passengers embarked upon a half-day ground tour.

Although the pilot had been on the ground at Hilo for almost six hours, he filed his flight plan with Honolulu FSS by radio after takeoff. He then requested and got a full weather briefing. It included a "VFR not recommended" advisory for the interior portions of all islands and a forecast of occasional three-mile visibilities in haze and moderate rainshowers. Ten-thousand-foot Mount

Haleakala on Maui, the principal obstacle along the route, was, in fact, engulfed in cloud.

Under conditions of limited visibility, Scenic Air Tours airplanes, which in principle flew VFR only, would navigate by VOR/DME. After leaving Upolu Point, they would follow the 294-degree radial of Upolu VOR across the 40-mile-wide channel separating Hawaii from Maui; this would keep them safely south of Mount Haleakala.

Today, however, the pilot of Flight 22 evidently planned to fly a little more to the south than usual, crossing the island of Kahoolawe, which lies just south of Maui. He asked the FSS for the status of the restricted area over the island, and obtained authorization to cross it at above 5,000 feet. He said he would be flying at 6,500 feet.

Shortly after this exchange, the pilot of another Scenic Air flight called the pilot of Flight 22 on 122.75 and asked his position. He replied that he was 37 nm from the Upolu VOR.

There were no further communications from Flight 22. Within the next couple of minutes, the airplane struck the southern flank of the summit of Mount Haleakala at an altitude of about 9,600 feet. The pilot and eight passengers died instantly.

The wreckage path was short, indicating low forward and high vertical speed, and oriented along a 200-degree track. Investigators concluded that the airplane had struck in a stalled attitude, probably as the pilot veered to the left to avoid the mountain that had unexpectedly materialized before him in the clouds.

National Transportation Safety Board investigators considered a number of possible explanations for the navigational error, including winds aloft, directional-gyro precession and a possible wish of the pilot to show his passengers the Mount Haleakala crater. None of these was persuasive.

If his navigational error was due to oversight, it may have been abetted by a somewhat cavalier attitude about charts. The pilot had three Hawaiian Islands sectionals in the airplane with him, all folded in his flight bag. The notebook of navigational and touristic reminders that he had assembled for himself, and that included the correct outbound heading from Upolu Point, was safely stored at home.

The probable cause of the accident, the NTSB found, was "the captain's decision to continue visual flight into instrument meteorological conditions...and his failure to properly use available navigational information."

In an unusually eloquent dissent, member John Lauber, while not differing with the factual findings, gave a different version of what constituted a "probable cause." Arguing that the choice of a probable cause should be "primarily a vehicle for effecting positive changes," Lauber observed that a finding of pilot error deprived the report of most of its cautionary value, because "few pilots will see any apparent relationship between what we believe this pilot did and [their] own piloting skills." In Lauber's view, the crux of this accident was not the performance of the pilot on the day of the flight, but his entire past history as a pilot, and the failure of Scenic Air Tours to investigate that history. (There was no legal requirement that they do so.)

Many pilots, Lauber wrote, "do not possess those qualities of character and judgment so necessary to be a safe pilot." These shortcomings are often difficult to identify, but in this case "the pilot left a readily identifiable trail of information that indicated he was not likely to exercise the degree of care and caution we demand of professional pilots."

"Our investigation," Lauber continued, "revealed that this pilot had been dismissed by five employers for misrepresentation of qualifications and experience, failure to report for duty, disciplinary action, poor training performance, and work performance that was below standards. Based on a background check, another operator rejected his application for a pilot position for failing to disclose information and misrepresentation concerning previous employment.

"Scenic Air Tours apparently conducted no such extensive background check. It is certainly true...that this pilot's actions were directly causal to this accident. It is also equally true, I believe, that the actions, or inaction, of Scenic Air Tours just as surely cast the dice that ultimately determined the tragic fate of these passengers."

Lauber's dissent raises an interesting philosophical issue. Should the Board's "probable cause"—the pith and purpose of all its investigative and analytic work—be shaped by some kind of rational or scientific criteria, or by a desire to enhance the propaganda value of accident reports? One can easily sympathize with Lauber's feeling that the Board's work is wasted if it produces no beneficial effect on air safety. But the idea that the probable cause should be a tool of change has an obverse: Why can it not be a tool of the status quo as well? If the probable cause can be shaped to serve a noble purpose, can it not also be shaped to protect a powerful interest or support the agenda of a politically appointed Board? ◀

This article is based solely on the National Transportation Safety Board's report of the accident and is intended to bring the issues raised to the attention of our readers. It is not intended to judge or to reach any definitive conclusions about the ability or capacity of any person, living or dead, or any aircraft or accessory.

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Boomers and a Bad Radar

OS2 John Bouvia

By Lt. Mark E. Schimpf

No one plans to fly into a thunderstorm. I'd been through all the weather lectures that stress avoiding turbulence, icing, and lightning around convective activity, but the point wasn't truly driven home until I experienced it first hand.

The day was going to be a long one. I was flying the P-3C on a round-robin from NAS Moffett Field to Wright-Patterson AFB, then to NAS Glenview, and back to Moffett. In all, it would be about a 16-hour day if we had no delays.

The weather brief at Moffett made it clear there would be some interesting flying in the Midwest where we were headed. A strong cold front was making its way through the Great Lakes states, creating some powerful thunderstorms. The weather was clear and calm in California, as it is almost every day in the summer. The weather remained clear until we reached the Mississippi River on our way to Wright-Pat. We were soon requesting deviations from track to avoid the weather, and ATC gave us radar vectors to avoid a line of cells between us and our destination. Everything went smoothly, and we made it safely into Wright-Pat.

On the ground, my 2P and I went into weather for a thorough update on what to expect on our way to Glenview. The line was forecast to be past Chicago by the time we arrived, but first we would have to circumnavigate a group of cells crossing Indiana. The weather at Wright-Pat wasn't exactly CAVU, either. The sky had grown dark and cells were poised just northwest of the field. We decided to jump back in the plane and try to make our way before the cells reached the field.

As we taxied, I talked to Metro for an update. The cells were about three miles west of the field, but clouds had darkened the sky and we needed to decide whether to take off. The flight engineer and the second pilot said they wanted to wait out the storm; however, the third pilot and I were sure that we could safely take off to the south and then navigate our way around the cells visually, using the aircraft's radar and taking radar vectors from Center.

The decision was ultimately mine, and I decided to go. As it turned out, we were able to navigate our way around the storms in the vicinity of the AFB and head toward Glenview.

The first 25 minutes of the leg were uneventful. We visually navigated our way around the cells, requesting deviations to avoid the weather. We also checked with the radar operator in the tube of the aircraft to confirm the headings. At times, his calls of the clouds ahead did not seem to jibe with what we saw, but with clouds all around, I assumed he was looking at another cloud. I had no reason to think that we might have a problem with our radar. Unfortunately, we did.

The radar azimuth was no longer locked into alignment and what the radar operator saw on the screen as being straight ahead was actually at the 8 o'clock position. The radar was 120 degrees out of slew!

Flying at FL240 we soon entered some thin clouds surrounding the larger cell, and I could no longer depend on visual means to circumnavigate the boomers. So what did I put my faith in for storm avoidance? A radar system that was out to lunch.

"Sensor Three," I called the P-3 radar operator, "what's the best heading to avoid these cells up ahead?"

"It looks good straight ahead sir. You should be out of this stuff in about three miles."

It sounded good to me so I continued ahead, but the weather did not improve. We soon found ourselves in moderate icing conditions, and the air was getting a little bumpy. The third pilot did an excellent job of flying the aircraft while I tried to find our way out of the mess.

"Three, Flight, are we going to break out of this stuff soon? It's getting kind of ugly up here. Let's set condition 5, guys."

"Flight, Three, you should be breaking out of this stuff any second."

According to his radar scope, we should have broken out, but what he saw as straight ahead was actually a clear signal caused by the radar blanket (which protects the inside of the aircraft from the radar energy). It was now becoming apparent that this radar was having a tough day and couldn't be trusted. By this time, the icing was heavy, and communication with ATC was almost impossible, because of static caused by the icing. We were in moderate turbulence, and we could see lightning. What scared me the most, though, was that I had no idea what lay ahead. Stories of aircraft dropping 20,000 feet and suffering Class A damage in storms ran through my head. Was this to be *our* fate?

Fortunately, it was not. I finally established comms with Center and asked for radar vectors out of the cell. At first, they reported that they weren't painting us on radar, which didn't make me feel real good. But they picked us up again and told us to continue on course. In a minute or two, we were out of the bad weather and continued on to Glenview without incident. We spent the night at Glenview while we tried to repair the radar, and more importantly, repair our nerves.

The aircraft made it through with only some chipped paint on the nose radome and the leading edges of the wings. It could have been a whole lot worse.

The P-3C's radar is not designed for weather avoidance, but many radar operators have learned to use the system to give the flight station a good heads up on the weather ahead. This breeds a certain level of false confidence that we can depend on the radar to bail us out of a bad situation. In my case, the radar was more of a detriment than a help. I think the entire crew gained respect for the danger of a storm cell, and you can bet I'll keep a safe distance in the future. ◀

Lt. Schimpf was with VP-47 at the time of this story. He is currently assigned to NAF Mildenhall, where he flies C-12s.

BRAVO ZULU

Left to right: LCpl. M.W. Kaiser, USMC; 1stLt. G.R. Cox, USMC; 1stLt. E.P. Lauer, Jr., USMC

1stLt. E.P. Lauer, Jr., USMC
1stLt. G.R. Cox, USMC
LCpl. M.W. Kaiser, USMC
HMM-365

While on GCA final at MCAS New River, at 800 feet AGL, 90 knots, with a 500-fpm descent, Rugby 00, a CH-46E, suddenly yawed to the left with a nose tuck. First Lieutenant Lauer (HAC) immediately tried to counteract the increasing yaw rate without success.

After the helicopter made two 360-degree revolutions about the yaw axis, 1stLt. Cox (copilot) secured the AFCS. After one-and-a-half more revolutions, the aircraft stabilized at 300 feet, approximately 60 knots, heading in the opposite direction, one mile from the air station. After the HAC regained his bearings, he made an AFCS-off landing at New River.

Postflight inspection and an EI revealed that the forward lateral upper-boost actuator had caused the Sea Knight to enter uncontrolled flight. Securing the AFCS was only coincidental to the aircrew regaining control, but their dogged determination helped save the aircraft. ➤

LCdr. James Bauser
Ltjg. Charles Berger
VF-74

While operating from USS *Constellation* (CV 64), Devil 105 was part of a three-plane bombing hop at the Vieques target complex. During the off-target rendezvous, the division lead told the crew of 105, "Check your wings." LCdr. Bauser (pilot) replied that he was troubleshooting a CADC problem and confirmed that his wings were set at 55 degrees.

While the pilot tried to manually engage the wingsweep handle in the "spider detent," the wings swept aft to 68 degrees and refused to program forward. After troubleshooting within the division and with the maintenance people on the ship, it was apparent that the wings were stuck and that a shipboard arrested landing was out of the question.

Darkness was rapidly approaching and LCdr. Bauser and Ltjg. Berger (RIO) diverted to NAS Roosevelt Roads with the permission of the ship's CO. The NAS would have 11,000 feet of runway as well as short- and long-field arresting gear.

Reducing their gross weight to 49,000 pounds (4,000 pounds of fuel), they tested their Tomcat during slow flight. However, as they slowed to the 15-unit approach speed suggested by NATOPS, the aircraft became unstable below 185 KIAS. The crew decided to fly a faster-than-normal straight-in approach, slowing to on-speed just before touchdown.

With a 10-14-knot crosswind, Devil 105 touched down at 190 knots – well above the 178-knot E-28 maximum engagement speed – and rolled 10,000 feet before engaging the long-field gear at 160 knots.

The right wing-sweep motor had seized, preventing the wings from sweeping forward. Each wing motor consists of two separate motors within the same casing. The small motor drives the wings forward and the large motor drives them aft. In this incident, the small motor on the right side seized, preventing the wings from moving even though the large motor was OK.

This incident is an excellent example of good airmanship and aircrew coordination. – Ed. ➤

Left to right: LCdr. James Bauser, Ltjg. Charles Berger

Left to right: Lt. Todd Evans, Lt. Ralph Lee

Lt. Todd Evans
Lt. Ralph Lee
VA-165

Returning from a patrol over southern Iraq during Operation Southern Watch, Lt. Evans (pilot) and Lt. Lee (BN) entered the case 1 recovery pattern. While going through the landing checklist, the crew saw an unsafe indication for the starboard main landing gear; the port main and nosegear indicated down-and-locked. The LSOs confirmed that both starboard main-gear doors were closed.

Lt. Evans and Lt. Lee joined the overhead VA-165 tanker for a closer inspection before continuing with NATOPS procedures. The tanker crew inspected the gear door and saw that the gear doors were actually open an inch. Numerous attempts to free the gear by positive and negative G's were unsuccessful. The tanker crew now saw that a repair patch on the aft upper corner of the engine-bay door had worked loose, blocking the forward landing-gear door.

Lt. Evans and Lt. Lee discussed the problem with squadron representatives onboard USS *Nimitz* (CVN 68), who recommended rolling inverted and applying negative G to force the engine-bay door patch back against the bay door to clear the landing-gear door.

At first, the maneuver didn't work, but the second try – with Lt. Evans rolling inverted, momentarily applying positive G, then negative G – effectively flattened the loose patch against the engine-bay door. The gear door opened and the starboard main dropped into a locked position.

The A-6E trapped successfully with an OK 3-wire. ◄

Lt. Dennis M. Brooks
VFA-125

Lt. Brooks was the flight lead on a 2 v 2 DACT flight on the Fallon TACTS Gold Range. After the initial merge and subsequent extensions, he began a 3.9-G turn at 320 KIAS and 18,000 feet MSL.

While in the turn, he felt his aircraft buffet, like he had entered another aircraft's jet wash. He rolled out to try to see the unseen aircraft. He didn't see anything and started another right turn, which immediately resulted in a left-wing down rolling moment.

Lt. Brooks quickly ended the engagement and started checking the FCS page along with his Hornet's control characteristics. He had no warnings.

He started a left climbing turn and called for his flight to join up. He then noticed severe damage to his left vertical stabilizer. The lead bogey pilot joined on the crippled Hornet and confirmed that not only were both vertical stabilizers badly damaged, but the left trailing-edge flap was missing,

BZs require an endorsement from the nominating squadron's CO *and* the appropriate CAG, wing commander, or MAG commander. In the case of helo dets, the CO of the ship will suffice. A 5x7-inch photo of the crew by a squadron aircraft should also accompany the BZ nomination. Please include a squadron telephone number so that we can call with questions.

the turtleback and trailing edges of the vertical stabs were damaged, and the aircraft was streaming fluid.

Helped by the ODO and the bogey lead, Lt. Brooks made a controllability check at 14,000 feet MSL. He reduced his airspeed while checking his plane's flying qualities.

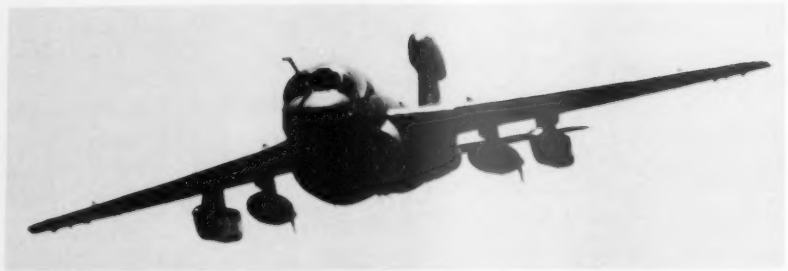
Because of NAS Fallon's 4,000-foot elevation, a half-flaps approach seemed to be the best configuration to keep the landing speed below the maximum engagement speed for the arresting gear. Lt. Brooks used lateral stick and rudder to counter the moderate roll and yaw that the half-flaps setting induced.

Lt. Brooks started a 10-knot-fast straight-in approach and made an arrested landing on runway 13R.

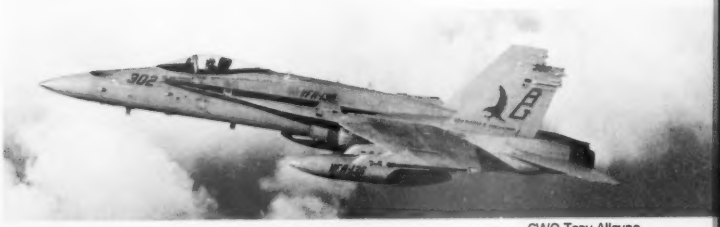
Investigation showed that the left flap had become detached at one hinge point and flailed against the fuselage. The second hinge point then broke, and the flap struck the vertical tails before falling away from the aircraft. ◄

Watch That Tanker!

Nate Leong



No, Watch the Prowler!



CWO Tony Alleyne

Now, Look Out for the Hornet!

By Lt. Kevin King

We were on the way home from a highly successful (and stressful) Southern Watch deployment. It was a beautiful day to go flying in the Northern Indian Ocean, the kind of day just made for fun. I had been crewed with a new guy at the beginning of the cruise, and now we had developed into an experienced and seasoned crew who had done it all—except for a sierra hotel, high-speed break!

We were Dash 2 in a section hop, led by one of our cat 2 pilots, known for his aggressiveness—just the thing we were looking for. We purposely briefed a 420-knot-plus break after some valuable section maneuvering (and lots of G awareness) around all the clouds in the area.

The flight went flawlessly; our fun meters were pegged. Finally, we headed back to the ship, zorching into our overhead holding at 4,000 feet to start hawking the pattern.

"Oh yeah," I said to my pilot as we noticed our tanker joining on us. "Forgot all about him." A three-plane high-speed break, with a G-limited airplane in the flight. Things were starting to get interesting. Mistake number one for the day: we had overlooked the fact that there was a tanker airborne, and did not even think of briefing him on our intentions for the break.

Everything was looking good. Our tanker bubba was hanging in there with the best of them as we slowly worked our way down through the stack. All the lawn darts were on deck, and there were two Toms in the pattern. That left just a Prowler and us.

"Marshal, checks done, fuel's fine," I called. "There's lead's hook." On the way down again, now down to 2,000 feet, just turning off the bow.

"Hey, looks like he's going to cut the Prowler out!" I said to my pilot as we turned inside a Prowler at our one o'clock position. But he was lower, so I figured that we'd end up extending downwind to follow them into the break. One hundred eighty degrees of turn to go to the initial, and the Prowler was now at our 1:30. We were passing 1,200 feet now to set up for the break, and we seemed to be almost co-altitude with the Prowler! I started talking to my pilot "Do you think he sees them?"

"Yeah, I think so. I dunno," he replied. Now at the 90 and at 1,000 feet, the Prowler began filling my windscreen at our two o'clock, pucker factor increasing. I asked my pilot again, and again his response was not really what I wanted to hear. Mistake number two: don't try to talk yourself out of something that you feel is wrong. Trust your gut instinct.

I came up on our base radio and asked, "Hey, you got the Prowler at 2 o'clock?" There was a pause as I noticed the lead BN's head slam to the right, and then immediately the three-plane was in a steep, climbing left turn! OK, pretty close on that one, but we'll bring it around and set up again.

We flew a very tight circle this time since we didn't want a lot of dead-deck time between us and the Prowler. I started to focus most of my attention on Dash 3—our tanker—who's now having a tough time hanging on. Mistake number three: never let yourself get overly focused!

Everything was looking good again. Turning in behind the ship, 350 knots and accelerating in the descent, tanker still hanging in there. We were really wrapped up now to make it to the initial. "Give me a couple...," our tanker started to say, and suddenly all my time was spent looking well aft of our wingline to make sure the tanker was still holding on. I came around to see how our turn to the ship was coming, and my heart stopped as I found myself staring at a Hornet completely filling my windscreen, much closer than I ever wanted to see one! All I could do is get "Hornet!" out on the radio, and again, we found ourselves in a steep, climbing turn around the boat.

Mistake number four: study the airplan. The Hornet was returning from that launch on an FCF profile, for sure in a hurry.

The next time around, our lead had had it, and we took it nice and easy into a completely empty pattern, followed by a lazy break and an uneventful recovery. After a lengthy debrief discussing all the aircraft we almost scraped paint with, we were able to draw some conclusions.

First, don't let your ego drive you to do something that you shouldn't be doing. Second, brief every aspect of every hop, no matter how benign it may seem at the time. And most important, be heads up all the time in the air. Never assume that the other guy sees you. This is especially true with the Intruder's side-by-side seating! Last, if there's a doubt, there is no doubt. I found out the hard way. Arrive alive! ◀

Lt. King flies with VA-165.

Mmmm-m!
Good Wings... Nice and Crunchy!

By Lt. Pat Connelly

PH1 Michael D.P. Flynn

You don't expect something like this to happen to an experienced aircrew. When you read or hear about such incidents, you conclude that these things happen to new guys fresh from the FRS. But here we were, a pilot and RIO with a combined total of 4,300 hours in the F-14, taxiing to cat 4, where we were about to make ourselves look bad.

It was a late afternoon AIC hop. Everything went so well that we were ready to go 15 minutes early. Our Tomcat had been spotted right on line with the catapult, so we were expecting to be one of the first to launch. We were still 12 minutes early when the yellowshirt motioned for my pilot to spread the wings. I swiveled my head left and right, and called "Clear!" on the ICS.

The wings programmed out from oversweep to the 20-degree position for takeoff. After a few minutes of relative quiet on the flight deck, the yellowshirt looked at his launch card. He shrugged and directed the pilot to fold the wings back into oversweep. The wings came back, and we waited.

A US-3 taxied up next to us on cat 3, went through the launch ritual of unfolding his wings, going into tension, running up his engines, then shooting into the air. An ES-3 launched next. A Hornet followed him up to cat 3. Our yellowshirt taxied us forward a few feet and directed us to kneel.

The deck crew began readying the Hornet for launch. My pilot called, "Wings!" over the ICS, and I checked again. "Clear," I called.

The small JBD raised on cat 3 as the F/A-18 pilot got ready. It was going to be close. My pilot picked up the wingsweep handle and moved it forward. I hawked the right wing as it inched out. Two feet from the raised corner of the JBD, I realized that our wing was going to hit the blast deflector.

"Stop! Stop! Stop the wings!" I screamed. The pilot had heard my "Clear" call, and after moving the wingsweep handle, looked at the director who was slowly taxiing us into the shuttle. Too late, the pilot reached over and snatched the wingsweep handle aft.

Time stretched out like a rubber band as the right wing slowly arced forward in spite of my pleas to stop. The leading edge of the right wing tip hit the corner of the JBD, then slid over the top of the rounded knuckle. The soft metal on the lower tip of the wing creased as the wing passed over the JBD. There was no other visible damage and things would have been OK at that point. However, at about the time the wings finished moving forward, the wingsweep detente got the input from the pilot's emergency move of the handle. The wings obediently complied, moved aft, and scraped over the top of the JBD.

As the right wing slid back, the corner of the deflector caught the leading edge slat and ripped it off the wing. The small crease that began when the wing moved forward became a gaping gash as the wing now moved aft, spewing fuel onto the flight deck and around the other aircraft behind us waiting to launch. Suddenly, the catapult officer appeared and signaled my pilot to shut down the right engine. Fuel kept splashing onto the deck. The deck crew hosed down the mess while a tractor towed our crippled jet out of the launch area.

I sat in disbelief. I was furious! Furious with the yellowshirt, my pilot, and most of all, with myself for letting such a stupid thing happen. I knew the JBD was up and that it was going to be close when we spread the wings.

I should have told my pilot to move the wings out slowly. I should have said, "No, wait until they launch the Hornet and lower the JBD."

I shouldn't have trusted the director so much. I figured that he saw the raised JBD and knew how much room we had to move the wings. Just because the guy *looks* like he has a handle on the situation doesn't mean you can trust him blindly. As for the pilot, you can bet that whenever he moves the wings on the deck now, he keeps his left hand on the wingsweep handle. ◀

Lt. Connelly flies with VF-21.

PH1 Michael D.P. Flynn

LETTERS

PH1 William Shayka

Re: "The Bingo Equation" (March '93)

FPO AP 96601-6224 – This article asks four good questions in its first paragraph but in answering them, the author sounds like a politician; each reader can understand the article to mean whatever he wants. I'd like to offer my opinion (which I naturally believe to be the correct answers). I promise not to be vague.

The bingo decision is made in advance by the CAG when he publishes his Tac Note on the subject. He defines the bingo fuel states for every plane in his air wing. If the ship is working bingo operations, controllers should automatically bingo an aircraft whenever it reaches bingo fuel. The idea behind the Tac Note is to make a time-critical decision in advance. No consultations with the CO, CAG, embarked flag or any other heavy are necessary.

However, the decision of whether to work bingo or blue water is also made at the CAG level or higher. Aircrew *don't* make this decision. If the ship decides to work blue water, then there is no bingo. (Anyone unwilling to fly while working blue water ops is simply in the wrong business.) When a heavy countermands a bingo steer, he is really shifting from bingo ops to blue water, which is his decision and his prerogative, not the aircrew's. If you ever receive such an order, you, too, must shift gears and start thinking and working blue water ops. Call "tank plus one" or "tank" on the ball. Remain overhead if you need to tank, and request the barricade if you reach that state as defined by the Tac Note.

If safety is jeopardized, a pilot can always use his authority as pilot in command to do whatever he feels is prudent, but working blue water ops is not inherently dangerous. Refusing to work blue water is not a good idea if there are no other problems with the aircraft. It is a good idea to insist on tanking overhead when below bingo. The crew in the article did not do this.

Working EMCON below Tac Note weather mins is also unsafe. The Tomcat crew had thunderstorms in all four quadrants that night. Night recoveries and EMCON just don't mix. Working "simulated" blue water makes no sense at all and should be struck from our lexicon. No one knows what it means. If you don't believe me, ask around your ready room and see how many different responses you get.

I hope my personal bingo gouge is a little clearer than the EA-6B endorser who at first relieves the pilot of responsibility in one sentence but then still holds him ultimately accountable in the next. Call bingo when you reach it and expect to go to the beach. If you are told to remain overhead, assume that you are now working blue water ops (because you are) and make sure everyone else knows about your special status. If you decide to go to the beach anyway you'd better have a more compelling reason than the PCL bingo chart to countermand a captain's order.

Your article's last sentence says it all. Headwork is a graded item on every flight in the training command, and while we no longer use grade sheets, our headwork and judgment are still graded on every flight in the fleet. That's how it should be.

LCdr. Thomas L. Mascolo
VA-95

We asked Capt. Mike McCamish, Commander, CVW-15, to give some insight into the wing's influence in bingo policy.

First, who really makes the bingo decision? Bingo states are determined before the air wing embarks during consultations between the CAG and squadron COs with reference to NATOPS. The pilot must strictly adhere to these numbers.

Second, is a bingo automatic once fuel reaches the predetermined state? Yes, at that time, the pilot must immediately begin a bingo profile, on the bingo radial, and he has to tell his controller and the ship that he is bingoing. (However, this better not be the first time that the CAG, the carrier skipper or embarked flag are aware that there is a fuel problem.)

Third, when can a pilot use his authority as pilot in command to take matters into his own hands? At any time until his decision is countermanded by CAG, the carrier CO or the embarked flag.

Fourth, does a pilot have the authority to countermand an order from a senior if the pilot feels that safety is in jeopardy? Yes, unless that senior officer is CAG, the ship's skipper or the embarked flag. In my opinion, once they override the pilot's decision, they own the airplane.

The pilot in the *Approach* article did not have the option to bingo. He was working blue-water ops. Bingo states did not apply and were not briefed. "Simulated blue-water ops" is a poor choice of words. What that tells me is that a divert is close enough should the ship or air wing decide to start using bingo fuel states, i.e., switch to bingo ops.

While I question the senior decision to operate EMCON during the first night blue-water recovery, especially in bad weather, I also question the squadron CO's decision to put a poor performer on this event.

I am also disturbed by the aircrew's lack of situational awareness. Not knowing if it was still EMCON, lack of aggressiveness in telling the ship to go active, and failing to

broadcast their fuel state as soon as they knew it could become a problem should have earned them a week on the bench. I must reiterate in the strongest terms that the time to tell someone about your low fuel state is not at bingo or tank, but as soon as you know you'll be low state at your recovery time.

What I said about early notification of possible fuel problems also applies to blue-water ops. It is the pilot's responsibility to let the ship know when he realizes he will be at charlie fuel or worse prior to recovery. He then needs to keep updating his state so that timely decisions about tanking can be made. If the pilot feels that these decisions are not being made fast enough, he must push his controller for answers or request a squadron rep. Communication is the key.

Night EMCON is not inherently dangerous. It can and has been done safely and successfully. Weather and a well-written OPORD 201 (CAG Tac Note) are key to safe night EMCON. Another key is the aircrew's responsibility to know when safety is being jeopardized and to break EMCON accordingly, whether it is for an emergency, low-fuel state, or simply that they can't find the ship.

Finally, the squadron CO must pay particular attention to who he has out on night EMCON recoveries.

Mike Silva

Re: "Pull the Tapes" (Jun '93)

NAS Brunswick – The author of this article noticed a trend in the number of writers who blame the controllers, which reminded me of the articles in the January issue about pilots and controllers, and the letters those stories generated.

After I read those articles again, I found that most of the time was spent explaining what happened and why it was the "other guy's fault." The emphasis should be in making recommendations, regardless of the fault, to prevent the same incident from happening again. Pointing fingers won't get us anywhere. When someone drops the ball, the team can't afford to have the quarterback blaming the receiver or the receiver blaming the quarterback.

When there's a mishap, the investigation must analyze the whole process, and not just the result, to identify all the links in the chain. The same is true with near mishaps. If we start by analyzing and improving the process that created the hazard, we can eliminate that hazard. When we focus solely on how we managed to save the day, we are only promoting the reactive solution.

When an aircraft is damaged, or an aviator becomes a "smoking hole," everyone loses. We are all an integral part of the Navy's aviation safety program – air traffic control included. Let's all spend a little less time deliberating and a little more time recommending how to improve the process that almost killed someone.

Lt. John B. Dygert
ASO
VP-11

Re: "The End of Hopes and Dreams" (Aug '93)

NAS Alameda – First, I'd like to say that many of us in the squadron look forward to reading *Approach*. It never fails to impress me. Second, no article ever affected me like this one.

Of all the safety notes, publications and letters we see, none has made me think so deeply about the procedures, policies and programs that are designed to save lives. Many safety-related areas such as tool control, safety, NOAP, NDI, and QA will benefit from my having read Lt. Ganse's story.

It pains me to know that often someone has to be hurt or die before safety receives proper attention. Be assured that this command has a new safety awareness, thanks to such fine articles.

AME-1 (AW) David B. Clouser
QA, VA-304

Thanks for the kind words. We have received several favorable comments and phone calls about Lt. Ganse's guest editorial, which apparently made many people stop and think about what and how they were doing. – Ed.

A Milk Run Gone Sour

By LCdr. Jim McClean

We were returning from a milk run to Miramar for an FRS CQ. The weather was forecast to be clear all the way up the coast and didn't require an alternate. I was a student BN with an instructor pilot. What could go wrong when you're flying with an IP?

Hmmm, the aircraft discrepancy book showed a recent gripe about a nose-gear tow link indication on dirty-up for landing. I didn't pay attention to who signed off. Those maintenance guys know more than I do, anyway.

The flight up the coast was relaxingly scenic, a perfect end to a successful det. With no clouds in the sky, I didn't bother with metro updates. After all, our terminal forecast was better than 3,000 and 5. My IP had pushed the throttles up so that we were moving much faster than max-range AOA. No problem, I figured about 3,000 pounds of fuel at the initial and we didn't need an alternate. Besides, he knew the fuel specs better than I did.

Passing Mt. Rainier, 80 miles from Whidbey, our state was 3.2. We would usually save a lot of fuel in the idle descent. Wait a minute, what were all those clouds over the Sound? Must be a high overcast. Oh well, we descended into the goo, with moderate rain at 17,000 feet.

Approach came up with the word that Whidbey was 1,200 broken, 1,500 overcast, with 2 miles of visibility in light rain. So much for the comfy terminal forecast and for the extra gas we burned zorching home. We were vectored way out west of the field and then turned back east for a GCA final.

We put the gear handle down at 12 miles and got three good indications. Fuel was now 2,300 pounds, 1,000 pounds below bingo to the nearest suitable divert. Well, we were in the box now, but we could handle it. The clag began to part around 1,500 feet. Visibility was reasonable.

Wait! Now the nose gear was showing a tow-link indication. It was down-and-locked just a minute ago! Now we need a visual check from the tower before we can land. No other Intruders were airborne near us.

From five miles out, we could see the field.

"It's almost VFR," the pilot says, "Tell Tower we want to turn downwind and land right after the nose-gear check." Our fuel was now 2,000 pounds and another trip around the GCA box pattern would buy us a low-fuel light for sure. Tower had other ideas, though.

"Negative, 803," they reply, "field is IFR. Execute published missed approach and expect eight-mile downwind following a TC-4C inbound."

At about this time, we zoomed past the tower and got a gear check, which revealed that our gear was down-and-locked, straight, and that the tow link was up, as it should be. We started turning downwind with 1,800 pounds of fuel. I asked again for a downwind entry.

"Negative 803, take heading 300, climb to 2,500 feet."

"Tower, 803 requests a contact approach," my pilot says. "I have visual contact with the field and I'm minimum fuel."

Contact approach? I hadn't heard that since Pensacola. But the tower bought it and we touched down with 1,700 pounds. Three good rollers on the deck never felt so good.

The lessons were many. That comfortable post-det mentality set me up. I still lived by the common student misconception that instructors were infallible and would never let me paint myself into a corner.

I should have paid a little more attention to those yellow sheets and sign-offs, and gotten a metro update, even when I didn't think I needed one. I should have also questioned my pilot if I thought we should be flying a max-range profile.

Of course, several years later and with lots of hours under my belt, all these concerns are clear to me. The IP got us out of trouble at the last minute with a good call, but a little more headwork early on would have saved us both a lot of trouble and worry. ◀

LCdr. McClean flew with VA-196 when he wrote this story. He is now assigned to NWC China Lake.

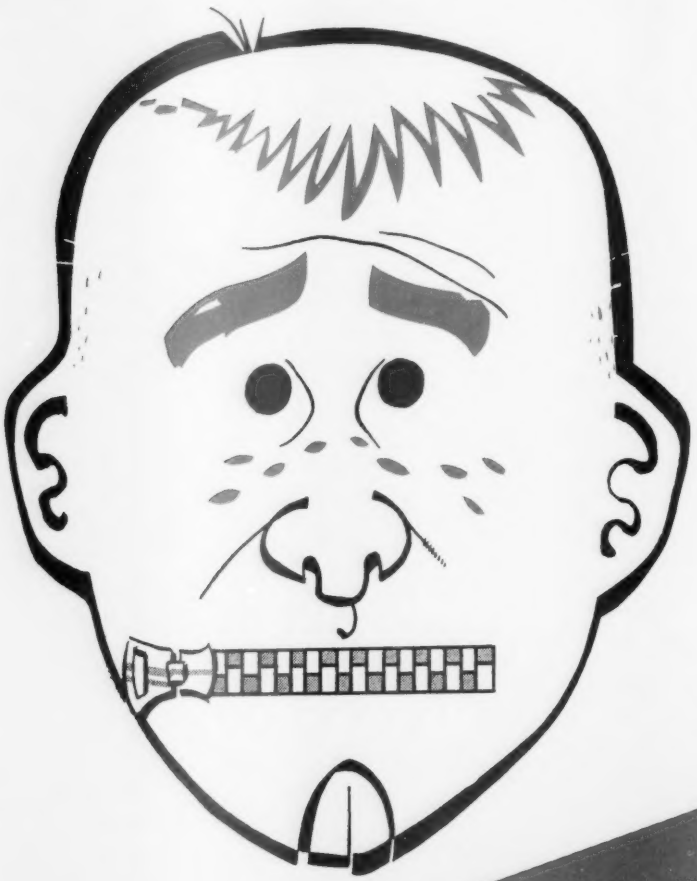
THE PAPER AND INK USED IN THE ORIGINAL PULICATION MAY AFFECT THE QUALITY OF THE MICROFORM EDITION.

Vultures' Row

This list includes Flight, Flight Related and Ground Class A Mishaps during FY-93.
Classifications and descriptions are subject to change.

DATE	PLATFORM	COMMAND	DAY; NIGHT	FATAL	FLIGHT REGIME; LOCATION
1 Oct	F/A-18B	NATC PAX	D	1 civ	Approach wave-off; Pax River, MD
4 Oct	AH-1W	HMM-365	D	1	Hot-refueling (AGM); at sea
13 Oct	HH-1N	VXE-6	D	3 (2 civ)	En route; Antarctica
16 Oct	F-14A	VF-302	D	0	ACM; Key West, FL
20 Oct	CH-46E	HMM-262	N	0	Night taxi attempted takeoff; Futenma, Okinawa
28 Oct	A-4M	FIT WEPS School	D	0	Simulated strike; 45nm from Yuma, AZ
1 Nov	F/A-18D	VMFA (AW)-225	D	0	High-speed abort; 29 Palms, AZ
3 Nov	EA-6B	VAQ-129	D	3	Takeoff; El Centro, CA
4 Nov	CH-53E	HMM-261	N	5	NVG ship ops; at sea
8 Nov	CH-46D	HC-11	D	0	Vertrep; at sea
22 Nov	F/A-18A	VFA-97	N	0	Night catapult; at sea
25 Nov	T-2C	VT-23	D	0	Single-engine approach; Kingsville, TX
9 Dec	AV-8B	VMA-214	D	0	En route; Yuma, AZ
15 Dec	F-14A	VF-33	D	0	ACM; Oceana Op Area
17 Dec	F-16N	VF-126	D	1	Climb out; Idaho Falls, ID
22 Dec	LC-130F	VXE-6	D	0	Landing; Antarctica (not USN)
23 Dec	F-14A	VF-201	D	1	ACM; Dallas, TX
18 Jan	F-14A	VF-101	D	0	ACM; Key West, FL
25 Jan	F-14A	VF-24	N	0	FCLP; Miramar, CA
13 Feb	CH-53D	HMH-363	N	0	Unaided external lifts; Somalia
15 Mar	F-14B	VF-101	D	2	Pilot fam; N. Carolina Coast
21 Mar	SH-2F	HSL-37	N	3	SSC; at sea
22 Mar	A-6E	VA-85	N	0	Takeoff; Fallon, NV
22 Mar	CH-53D	HMH-463	D	0	PMFCF; Kanehoe, HI
26 Mar	E-2C	VAW-124	N	5	Foul-deck waveoff; at sea
13 Apr	F-14D	VF-11	N	0	FCLP; San Clemente Is., CA
14 Apr	A-6E	VA-95	D	0	Mid-air collision with civ. acft. (low level); WA
14 Apr	SH-2F	HSL-32	D	0	ASW; at sea
21 Apr	A-6E	VA-34	N	2	Rdvz, mid-air; Nellis Range, NV
23 Apr	SH-2F	HSL-33	D	0	Landing; Bakersfield, CA
27 Apr	HH-46D	MCAS	N	0	En route; Beaufort, SC
29 Apr	F-14A	VF-21	D	0	ACM; Atsugi, Japan
12 May	AV-8B	VMA-211	D	0	En route; Yuma, AZ
19 May	VH-60	HMX-1	D	4	PMCF; La Plata, MD
21 May	F/A-18C	VFA-151	D	0	ACM; Lone Pine, CA
4 Jun	F-14A	VF-302	D	1	ACM; SoCal Op Area
11 Jun	ES-3A	NAWC	D	1	Maintenance (AGM); Pax River, MD
15 Jun	SH-60F	HS-10	D	1	PMCF; Imperial Beach, CA
17 Jun	EA-6B	VMAQ-2	D	0	Takeoff; Cherry Point, NC
22 Jun	F/A-18A	MAG-42	D	1	ACM; Yuma, AZ
25 Jun	TA-4J	VT-22	D	0	Landing; Corpus Christi, TX
3 Jul	HH-46D	HC-5	D	0	Ditching; Indian Ocean
12 Jul	F-14A	VF-84	N	1	Crewman blown overboard by jet exhaust (AGM); CVN 71
15 Jul	SH-60F	HS-1	D	1	Lineman run over by aircraft (AGM); Jax, FL
20 Jul	F-14A	VF-213	N	1	Ramp strike; CVN 72
23 Jul	A-6E	VA-75	D	2	Aircraft crashed into ridge during low-level; VA
5 Aug	F-18C	VFA-136	N	1	Aircraft crashed during bombing run; Fallon, NV
10 Aug	AV-8B	VMA-231	D	1	Aircraft crashed on short final; Cherry Point, NC
16 Aug	AH-1W/UH-1N	HMLA-367	D	2	Mid-air during photo op; Catalina Is., CA
24 Aug	HH-46D	HC-5	D	3	En route; Fujairah, U.A.E.
8 Sep	AH-1W(2)	HMLA-269	N	4	NVG ordnance mission; 29 Palms, CA
8 Sep	A-6E(2)	VA-95	D	0	Rendezvous; N. Arabian Gulf
8 Sep	AH-1W	MAG-46, Det A	D	2	En route; San Diego, CA
13 Sep	F-14B	VF-103	D	0	ACM; Oceana Op Area
20 Sep	UH-1N	HMLA-267	D	4	Training mission; 29 Palms, CA
22 Sep	AV-8B	VMA-231	D	0	Landing; Camp Lejeune, NC

GOT A SAFETY SUGGESTION?



Don't keep it to yourself!

Send it to:

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